

MCMS
6th Grade
NTI Packet
Day 12

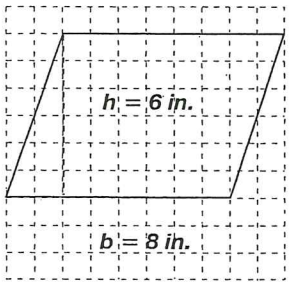
Day 12 6th Grade Math

Name _____

Reteaching
17-3

Area of Parallelograms and Triangles

Find the area of this parallelogram.



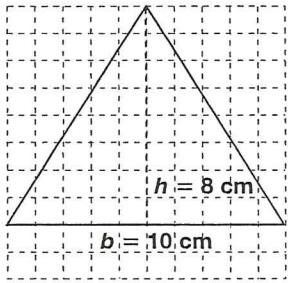
Use the formula $A = bh$.

$A = 8 \times 6$

$A = 48$ sq in.

The area of the parallelogram is 40 sq in.

Find the area of this triangle.



Use the formula $A = \frac{1}{2}bh$.

$A = \frac{1}{2} \times 10 \times 8$

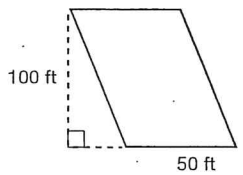
$A = 5 \times 8$

$A = 40$ cm^2

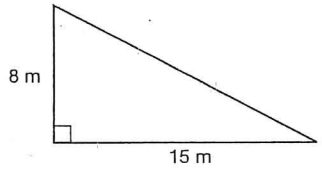
The area of the triangle is 40 cm^2.

Find the area of each parallelogram or triangle.

1.



2.

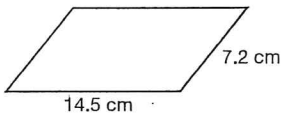


3. Triangle: $b = 6$ ft, $h = 9$ ft

4. Parallelogram: $b = 18$ m, $h = 13$ m

5. Triangle: $b = 20$ in., $h = 9$ in.

6. **Writing to Explain** Tony says he does not have enough information to find the area of this parallelogram. Is he correct? Explain.



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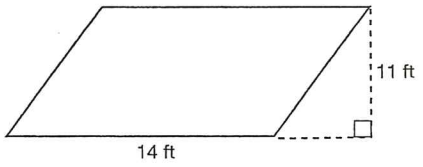
Name _____

Practice
17-3

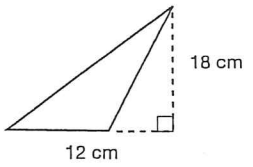
Area of Parallelograms and Triangles

Find the area of each parallelogram or triangle.

1.



2.



3. Triangle
$b = 30$ m
$h = 15$ m

You must change these to the same units.

4. Parallelogram
$b = 18$ in.
$h = 2$ ft

5. Triangle
$b = 20$ ft
$h = 3$ yd

6. **Writing to Explain** The area of a triangle is 42 square inches. The triangle's base is 6 inches. Find the height of the triangle. Explain how you do it.

7. **Number Sense** A parallelogram has a base of 4 m and a height of 3 m. Find the area of the parallelogram in square centimeters.

8. **Estimation** Which is the best estimate of the area of a triangle that has a base of 23.62 cm and a height of 8.33 cm?

A 200 cm^2 B 160 cm^2 C 100 cm^2 D 50 cm^2

9. **Reasoning** The area of a figure is 36 cm^2. Give 4 possible shapes of the figure. Where possible give 3 possible sets of dimensions for each possible shape.

Basic Skills with Decimals Name_____ ID:12 Day 093

DO NOT USE A CALCULATOR

Date_____ Period____

Find each sum.

1) 49.3 + 63.3

A) 601.7 B) 87.27
C) 112.6 D) 469.7

2) 57.1 + 82.8

A) 15.6 B) 202.6
C) 581.8 D) 139.9

3) 308.9 + 6.8

A) 486.5 B) 104.9
C) 315.7 D) 300.509

4) 242.9 + 98.7

A) 802.2 B) 417.9
C) 341.6 D) 713.3

Find each difference.

5) 84.9 – 23.139

A) 61.761 B) 103.061
C) 167.661 D) 197.561

6) 201.7 – 132.05

A) 196.05 B) 330.45
C) 365.35 D) 69.65

7) 382.5 – 217.7

A) 2.1 B) 23.1
C) 164.8 D) 217.2

8) 103.4 – 27.43

A) 167.27 B) 255.57
C) 75.97 D) 76.77

Find each quotient.

9) 0.5 ÷ 2.5

A) 2.6 B) 0.9
C) 7.6 D) 0.2

10) 7.2 ÷ 6

A) 0.146 B) 4.9
C) 6.4 D) 1.2

11) 7.1 ÷ 7.1

A) 3.6 B) 1
C) 50.41 D) 14.2

12) 2.6 ÷ 5.2

A) 6.7 B) 0.5
C) 2.8 D) 5.6

Find each product.

13) 7.9 × 8.5

A) 66.05 B) 65.25
C) 67.15 D) 61.15

14) 5.9 × 2.3

A) 13.54 B) 18.87
C) 13.57 D) 9.47

15) 3.4 × 7.3

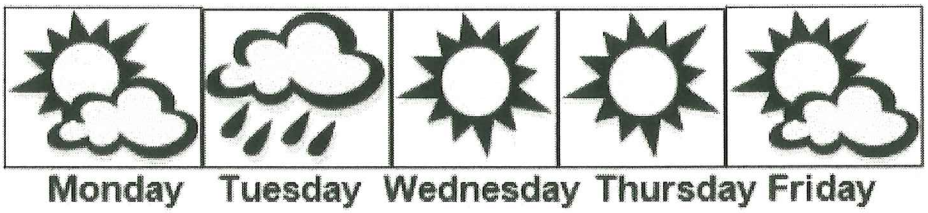
A) 15.02 B) 15.22
C) 10.7 D) 24.82

16) 8.7 × 0.1

A) 12.04 B) 1.97
C) 0.87 D) 6.77

Weather - An Introduction to Weather

by ReadWorks



What does the word "weather" mean to you? Everyone knows how to describe the weather. There are beautiful, sunny days with blue skies and then there are gray, rainy days perfect for staying in bed. But do you know what actually *causes* weather? The pictures above show the forecast for a week. Soon you will know what causes different types of weather!

Let's start with a scientific definition of weather. Weather is the state of the atmosphere at a given time and place. Four main factors determine the weather: *temperature, humidity, wind speed and direction*, and *air pressure.*

Temperature is the measure of how hot or cold the air is. When the sun shines down on Earth, it warms up the Earth's surface. But that is not all that happens. The warmth of the sun also heats up the water on Earth. This process is responsible for many changes in weather and weather patterns. A thermometer measures temperature.

Humidity is the amount of water in the air. The air always has water in it, even though we cannot always see it. Most of the weather conditions that we can observe come from humidity. Clouds, rain, and snow all have to do with humidity.

Wind speed and direction carry the weather. They also help forecasters predict the weather. Forecasters can measure wind speed and direction to determine how fast a storm is moving. Often the winds blowing far up in the Earth's atmosphere are different than the winds we feel on Earth.

Air pressure has to do with the thickness of air. To understand air pressure, imagine you are standing in a room packed with people. There is a lot of pressure in the room. You can feel the person behind you hitting your elbow. If someone opens up a door into an empty room,

people will start moving into the empty room until there are about the same number of people in both rooms. Air particles spread out in the same way. They always move from an area of high pressure to an area of low pressure. A barometer measures air pressure.

All of the weather's four main factors interact with each other. As air particles respond to changes in pressure, they move and create wind. On a very humid day, there may be many clouds in the sky. When it is cloudy, many of the sun's rays never reach the Earth. What does this do to the temperature?

Name: _____ **Date:** _____

1. What is this passage mostly about?

A. Temperature

B. Barometers

C. What causes weather

D. The atmosphere

2. You know that clouds are made up of water particles. On a day that is cloudy, you would expect:

A. High temperatures

B. High humidity

C. High wind speeds

D. A lot of air pressure

3. When you look up in the sky and see storm clouds moving your way, you are observing

A. temperature

B. pressure

C. wind speed and direction

D. air pressure

4. All of the following cause weather, *except*

A. the Weather Channel

B. the sun warming up the water on Earth

C. clouds moving across the sky

D. humidity

5. What is humidity?

A. The amount of water in the air

B. When people are pushed to another room

C. The temperature of the air

D. The main cause of weather

6. When it is cloudy, many of the sun's rays never reach the Earth. What does this do to the temperature?

_____

_____

_____

7. What are the four main ingredients of weather?

_____

_____

_____

8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

Weather is caused by a few things, _____ air pressure.

A. always

B. including

C. excluding

D. but

6th English
NTI Day 12

Directions
Read this article. Then answer question 45.

Building for "Pests": Critters Need Houses, Too

by Lela Nargi

Sometime in the middle of the Stone Age, say 9000 B.C., our ancestors moved house—from temporary, tent-like structures to more enduring abodes that might last a lifetime or longer. Thousands of years later, they started making simple houses for the creatures they cared for, too. By the 7th century A.D., the Chinese were even building pens for their elephants!

As time went on, people dreamed up bigger, fancier digs for both their families and their animals. Explains Dr. Carol Krinsky, a professor of art and architectural history at New York University: In 17th-century France, "Horses were so important for transportation. And they were symbols of prestige. So the stables at Versailles"—the palace outside Paris built by King Louis XIV—"are overwhelmingly glamorous."

These days, fancy mini-houses show how much we value our beloved dogs and canaries. But ecologically minded architects around the world are thinking up ways to make houses, not for pets, but for *pests*!

Creatures + Comfort

Dr. Joyce Hwang is a professor of architecture at the University of Buffalo. According to her, a "pest" is any animal people don't want around. "But that differs from country to country, city to city, even person to person," she says. "In some places, pigeons are considered pests, while in others"—like Turkey and Belgium, where pigeon racing is a popular sport—"they are valued."

Hwang wants the homes she designs for bats, bees, squirrels, and other critters to look cool and beautiful. Her reason: "Well-designed architecture is able to bring attention to a situation." In the case of bats, the situation is White-Nose Syndrome. This is a fungus that's infesting bats' caves and killing them. Seven million bats have died from it in North America so far.

"Many people are afraid of bats," says Hwang. "They think of them as animals that transmit rabies. But bats are so helpful to humans as predators of insects (they can eat lots of mosquitoes!) and as pollinators." (That is, they transmit pollen from flower to flower on trees like peaches and avocadoes, fertilizing them so they'll grow into fruit.) "Good architecture will make people curious about bats," says Hwang. And maybe make them want to help, as well.

So far, Hwang has built two kinds of houses for bats: Bat Tower, a zigzag of plywood that she and some of her students set up beside a bug-infested pond. And Bat Cloud, a clump of cozy pods that hang in the middle of a nature preserve. She designed them both carefully, to give bats the warmth they require and the rough surfaces they like to climb and hang on.

Even so, Hwang knows there's no guarantee any bats will move into the houses she's built—no matter how endangered they are. But she insists, "It's still important to make them. Putting up more habitats increases the chances that animals will be able to find a place to live and survive." It also shows people how architecture can be designed to include—not exclude—animals that are helpful for our environment. And, says Hwang, "make [humans] pay more attention" to the possibilities.

Great (Animal) Estates

Los Angeles-based architect and artist Fritz Haeg would also like people to pay attention—to dozens of kinds of animals. In 2008, he was commissioned by the Whitney Museum of Art in New York City to make his first "Animal Estates." These were habitats for animals that lived on the Whitney's site 400 years ago, when the land was marsh and tulip forest: bald eagles, northern flying squirrels, eastern tiger salamanders, and nine other species.

Haeg installed nest boxes, burrows, and houses made from gourds around the entrance to the museum. He hoped they would call attention to how the development of cities means a lot of animals can no longer live among us; they used to make their homes in and around trees, and when we cut down trees to put up our buildings, we destroyed their habitats.

Haeg says he wants his Animal Estates to show how, "With very simple means, we can accommodate those species again. And some of them we might really want to have around." (Like Dr. Hwang, he mentions insect eaters and pollinators.) He's since been commissioned to design Estates in eight other cities—for many different animals, depending on what's native to those locations. For example, his Estates for the industrial (and polluted) city of Rotterdam in the Netherlands includes a habitat for the Eurasian Skylark. Its population has decreased by 95 percent in the last 10 years.

Fritz Haeg's tactics are sort of the opposite of Joyce Hwang's. He designs houses that are basic and not concerned with looking lovely. He says, "I wanted to do handmade, modest structures that would get people thinking: What kinds of animals do I want to host on my land?" He hopes people will research what animals need homes where they live. Anyone can download one of his designs from the Internet and build it themselves. Says Haeg, "I want to capture people's imaginations and have them ask, 'Who else is this city for?' "

Planning Page

You may PLAN your writing for question 45 here if you wish, but do NOT write your final answer on this page. Writing on this Planning Page will NOT count toward your final score. Write your final answer on Pages 13 and 14.



45

Why does the author compare how people treat "pets" and "pests" in the article? How does the author develop ways that people are helping "pests" throughout the article? Use details from the article to support your response.

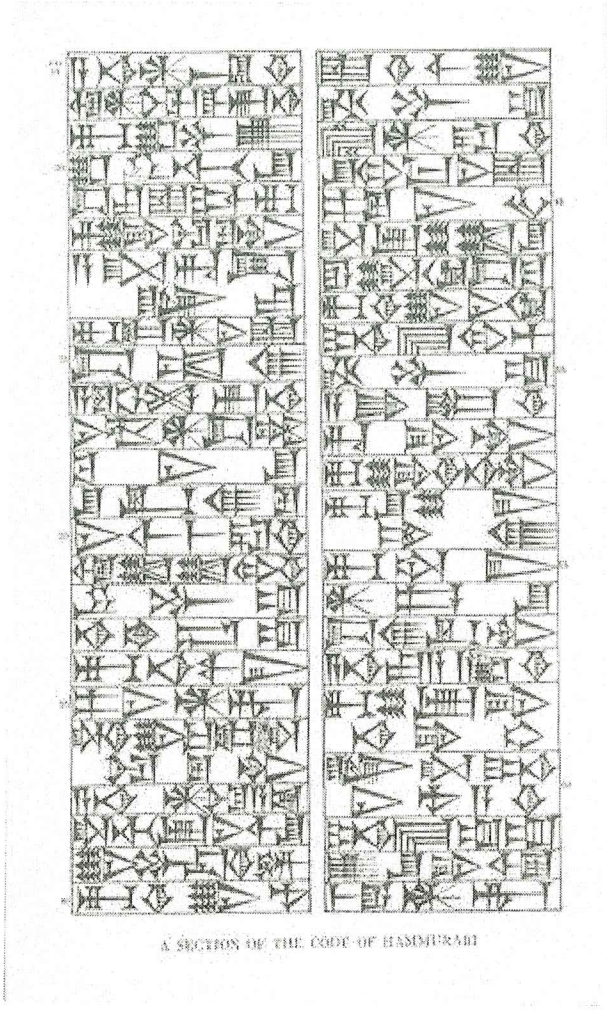
In your response, be sure to

- explain why the author compares how people treat "pets" and "pests" in the article
- explain how the author develops ways that people are helping "pests" throughout the article
- use details from the article to support your response

Day 12

The Code of Hammurabi

by ReadWorks



A SECTION OF THE CODE OF HAMMURABI

Section of the Code of Hammurabi

We may take for granted the existence of written laws. Many people grow up with the understanding that certain laws exist. If you fail to stop at a stop sign in your car, you will likely receive a fine. Refusal to pay your taxes can result in a prison sentence. In some states, killing another human being can even result in the death penalty.

The U.S. Constitution, the supreme law of the United States of America, was written to ensure that everyone knows the laws of living in this country. Instead of allowing a single ruler to impose his or her will, people are required to follow a set of written laws. Breaking them comes with certain punishments. Based on the code of laws, a judge determines the punishment for a particular crime. Committing murder is a much larger crime than running a red light. Thus, the punishment for murder is much greater than failing to stop at a red light.

Written laws existed long before the U.S. Constitution. Historians trace the creation of written laws to around 1772 B.C. At that time, what we now consider Iraq was known as Mesopotamia. And the ruler of Mesopotamia was a man named King Hammurabi. Hammurabi was a member of the Babylonian

people. He was also a talented military leader and a smart governor. It was he who is credited with creating the first written laws.

Hammurabi's Code often required the criminal to receive the same injury that he or she had inflicted on a victim in an effort to make the punishment fit the crime. Such laws may seem harsh today, but they were intended to prevent society from descending into chaos and disorder. They helped to advance the rule of law in Mesopotamia.

Hammurabi created 282 laws, which dealt with aspects of everyday life. Crimes came with specific penalties, and many of them were punishable by death. The laws were inscribed on a stone pillar, and became known as Hammurabi's Code. To ensure that everyone knew all 282 laws, they were also probably read aloud in public on a regular basis. That way, no one could be excused for committing a crime because of not knowing the law. Laws in the United States function in a similar way. The United States government usually allows people full access to its laws, so the fact that you don't know that running a red light is illegal in the U.S. does not excuse you from paying a fine for doing so.

One of many differences between Hammurabi's Code and the U.S. Constitution is that the laws in Hammurabi's Code often depended on social standing. Soldiers and noblemen had certain rights that ordinary citizens and poor people did not. Still, the existence of laws prevented a future single ruler from imposing his will on the populace.

Hammurabi's Code also dealt with similar issues that we confront in our own justice system today. The laws covered issues related to trade, marriage, taxes, theft, and murder, among other things. To create the code, the king collected laws from different regions of Mesopotamia and compiled them into a single rulebook. If a person was accused of a crime, that person would face a judge. This judge would determine whether the accused person was innocent or guilty of the crime. If the person was found guilty, then the judge would prescribe the appropriate punishment as written in Hammurabi's Code.

Here's an example of how Hammurabi's Code might have been used in Mesopotamia. Imagine a shepherd is accused of stealing a sheep that was taken from a nobleman's flock. The shepherd and the nobleman are both brought before a judge. The nobleman introduces a witness. The witness claims to have seen the shepherd in the nobleman's field the night before the nobleman realized one of his sheep was missing. Then, the witness says, "The shepherd picked a sheep up and ran off with it in the direction of his own property." The witness is certain it was the same man because she got a good look at the shepherd's face and he was wearing the same hat that he now has on during this "trial." Later, the nobleman points out that the sheep found at the shepherd's place was marked with the nobleman's brand.

In an attempt to defend himself, the shepherd claims he purchased the sheep from a man in town. The shepherd names the man in town, and that man is also brought before the judge. The man says that he has never seen the shepherd and also that he was not selling sheep in the market on the day that the shepherd says he bought the sheep. The man continues to say that he was visiting his daughters. The man's daughters and their husbands act as witnesses and confirm that he was not in the market on said day.

Since the shepherd's story of purchasing a sheep from the marketplace has been cast into doubt by witnesses, the judge determines that he is guilty of stealing the sheep. The judge consults

Hammurabi's Code.

Law number eight states: "If any one steals cattle or sheep, or an ass, or a pig or a goat, if it belongs to a god or to the court, the thief shall pay thirtyfold therefor." This means that if a man steals a sheep that's owned by the ruling class in Mesopotamia, he would be required to pay 30 times the amount of the sheep's worth. The law continues: "If they belonged to a freed man of the king he shall pay tenfold; if the thief has nothing with which to pay he shall be put to death." Because the shepherd is found guilty of stealing the sheep from a nobleman and noblemen are considered to be members of the court, the shepherd is required to pay 30 times the cost of the sheep based on the law. According to Hammurabi's Code, if the shepherd does not have enough money to cover his payment, he will be put to death.

Fortunately for the shepherd, he has many other sheep in his flock. He sells 30 of his sheep and pays the nobleman. As a result, the shepherd now has only three sheep left in his flock.

Name: _____ Date: _____

1. What is Hammurabi's Code?

A. a collection of 282 laws believed to be the first written laws

B. a group of soldiers and noblemen who lived in ancient Mesopotamia

C. the ancient idea that a punishment should fit the crime

D. the punishment for stealing sheep from a nobleman in ancient Mesopotamia

2. What does this passage describe?

A. the origin and meaning of the word "judge"

B. what Mesopotamian society was like before written law

C. the life and death of the Mesopotamian King Hammurabi

D. the function and influence of the first written laws

3. Read these sentences from the text.

In an effort to make the punishment fit the crime, Hammurabi's Code often required the criminal to receive the same injury that he or she had inflicted on a victim. Such laws may seem harsh today, but they were intended to prevent society from descending into chaos and disorder.

Based on this evidence, what might King Hammurabi have wanted to promote in society?

A. chaos and confusion

B. justice and order

C. anger and violence

D. wealth and fortune

4. How might Hammurabi's Code have prevented a single ruler from imposing, or forcing, his or her will on people?

A. by convincing the public that a ruler always wants what is best for the people

B. by punishing a ruler for trying to change the Code

C. by forcing a ruler to get people to agree on a new law before adding it to the Code

D. by preventing the ruler from making up new laws that were not mentioned in the Code

5. What is the main idea of this text?

A. In the time of Hammurabi's Code, it was illegal for a shepherd to steal a sheep from the flock of a nobleman.

B. The U.S. Constitution is mostly based on the ideas and laws mentioned in Hammurabi's Code.

C. Hammurabi's code and the U.S. Constitution differ in that the laws in Hammurabi's Code often depended on social standing.

D. Hammurabi's Code was the first collection of written law and advanced the rule of law in Mesopotamia.

6. Why might the author have described the imaginary trial of the shepherd who stole the nobleman's sheep?

A. to show that the shepherd did not commit the crime of which he was accused

B. to show that a single ruler could impose his or her will on other people

C. to show how Hammurabi's Code might apply to a specific situation

D. to convince the reader that Hammurabi's Code was unfair in its punishments

7. Choose the answer that best completes the sentence.

All 282 laws of Hammurabi's Code were also probably read aloud in public on a regular basis _____ no one could be excused for committing a crime because of not knowing the law.

A. although

B. however

C. above all

D. so that

8. What does law number eight of Hammurabi's Code describe the punishment for?

9. In the example of the trial of the shepherd, how did the judge determine the shepherd's punishment for stealing the nobleman's sheep?

10. Why is it important for laws to be written down? Support your answer with at least two pieces of evidence from the text.